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A NEW SPECIES OF *QUEMAYA* FROM THE
COLORADO DESERT OF CALIFORNIA
(HYMENOPTERA; TIPHIIDAE)

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The genus *Quemaya* is a group of primarily nocturnal brachycistidine wasps consisting entirely of small to minute forms which are brown or black. At least some of the species are abundant in nature but all are poorly represented in collections. Because of their nocturnal habits, small size and dull coloration they are often overlooked by the general collector.

Ultra violet light is a strong attractant for these wasps, and various black light sources such as argon or fluorescent tubes attract much larger numbers than do conventional incandescent lamps. The species described in this paper was first collected on a recent trip to California's Imperial County Sand Hills by use of a 15 watt fluorescent tube¹ housed in a standard transistorized inverter unit² and powered by a 12 volt automobile battery. The light unit was placed over a funnel trap, designed by W. R. Bauer, California Department of Agriculture, and allowed to run continuously through the night.

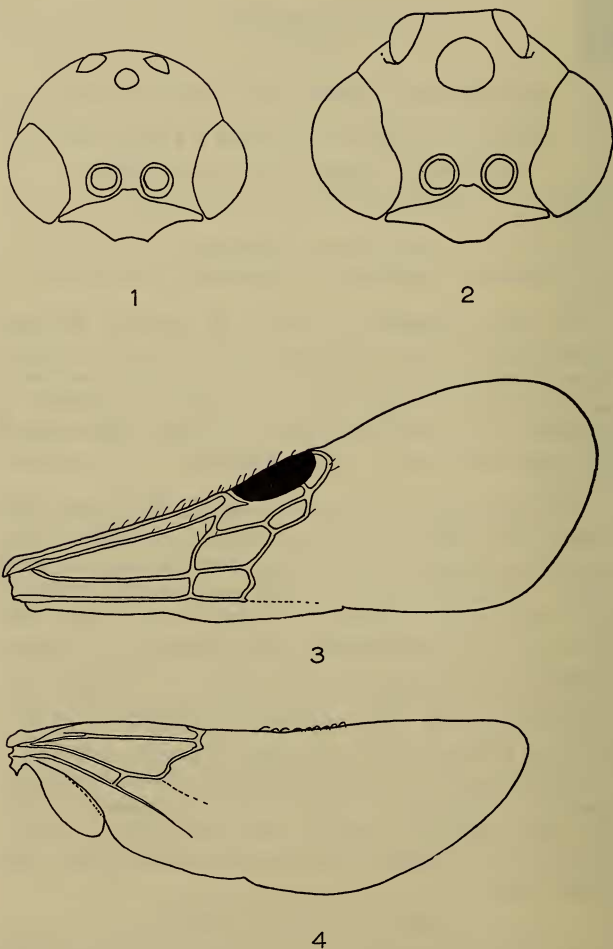
Abbreviations used in the following description are explained elsewhere (Wasbauer, 1966:6) with the exception of UID, the upper interocular distance, which is the distance between the tops of the compound eyes measured with the head in full frontal view.

***Quemaya arenicola* new species**

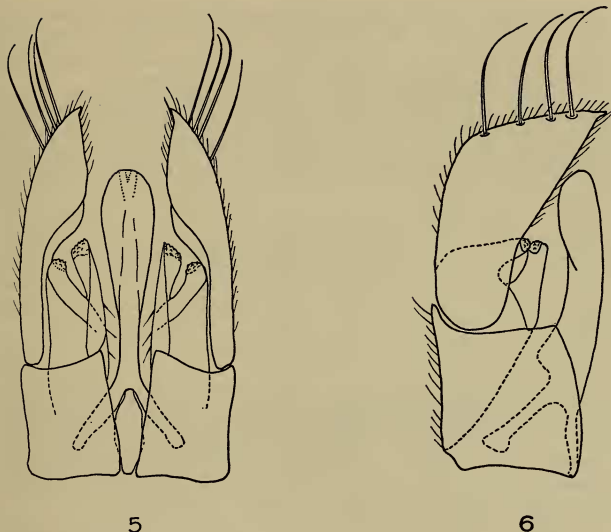
Description of male holotype: Head, mesosoma and first metasomal segment medium mahogany brown, remainder of metasoma nearly

¹ General Electric F15T8.BL

² Econo Light, Model E.C.F. 20. E.C.F. Electronics, Inc., 748 Peter Road, Wheaton, Illinois 60187.



FIGS. 1-4. *Quemaya* spp. 1, frontal view of head of *Q. perpunctata*. 2, frontal view of head of holotype of *Q. arenicola*. 3-4, anterior and posterior wings of paratype of *Q. arenicola*.



FIGS. 5-6. *Quemaya arenicola*, holotype. 5, dorsal view of genitalia. 6, lateral view of genitalia.

black; antennae, mandibles and legs straw yellow. Vestiture moderately abundant, consisting of short fine to long stout pellucid hairs, pale straw colored on head and mesosoma, becoming very long, brownish on apical metasomal segments. Body strongly impunctured, punctures deep and well defined; small second degree density on clypeus; larger, second degree density on face above antennal sockets and vertex between lateral ocelli; second degree density on pronotum medially; first degree density on posterolateral angles; second degree density on mesonotum and scutellum; first degree density on mesepisternum anteriorly, becoming second degree density posteriorly; first degree density on dorsolateral, posterolateral and posterodorsal angles of propodeum; first degree density on first metasomal tergum; first degree density on second metasomal tergum, becoming second degree posteriorly; second degree density on remaining metasomal terga except for row of larger closely set punctures before apex of each segment.

Head: Compound eyes strongly enlarged and convergent below (Fig. 2) $EH\ 1.15 \times LID$; $LID/TFD\ .45$; $UID/LID\ 1.6$; ocelli greatly enlarged, nearer to compound eyes than to each other, $OOL/POL\ .60$; clypeus with distinct preapical raised area that is narrower than space

between antennal sockets, median section of apical edge thin, lamellate, narrow, $0.39 \times$ length of lateral apical section; mandibles with two teeth, apical tooth long and acute, subapical tooth shorter, more blunt; gular carina not raised anteriorly into tooth or elevation.

Mesosoma: Pronotum rather long, in lateral view with strong posterior slope dorsally; mesonotum rising sharply above level of pronotum, thus not forming even curve with posterior edge of pronotum; propodeum with dorsal surface margined posteriorly by broad, shallow, irregular sulcus, curving anteriorly at sides; posterior face with broad shallow median longitudinal sulcus; anterior wing (Fig. 3) with two submarginal cells, second completely underlying first; first discoidal cell 1.23 times as high as second, 2.12 times as long as high; stigma black; veins lightly pigmented, straw colored; posterior wing (Fig. 4) with veins nearly colorless; jugal lobe not strongly surpassing apex of submedian cell.

Metasoma: Genitalia as in Figs. 5 and 6.

Length: 5.7 mm.

Type material: 6 miles west of Glamis, Imperial County, California, at fluorescent black light; holotype and 30 paratypes, 5 August 1966, M. S. Wasbauer collector, 14 paratypes, 19 September 1966, R. A. Flock collector. The holotype (no. 9306) and 22 paratypes have been deposited in the collection of the California Academy of Sciences, and 22 paratypes with the United States National Museum.

Variation: The paratype series varies in length from 3.3 to 6.5 mm. There is little variation in color or other morphological features.

Remarks: Individuals of *arenicola* are the largest in size now known for the genus *Quemaya*. Their large size, heavy punctation and certain structural features (presence of two submarginal cells in the anterior wing and the sulcus on the posterior face of the propodeum) indicate that this species is closely related to *Q. perpunctata* (Cockerell). It can be separated from *perpunctata* by the enlarged ocelli (OOL/POL *arenicola* less than 1.0; *perpunctata* more than 1.0) and very large strongly convergent compound eyes (Figs. 1, 2).

LITERATURE CITED

- WASBAUER, M. S. 1966. Revision of the male wasps of the genus *Brachycistis* in America north of Mexico. (Hymenoptera: Tiphidae). Univ. of Calif. Publ. in Ent. 43: 96 pp.

